

# ISO/IEC JTC 1/SC 32 N 0676

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\*Pacific Northwest National Laboratory (PNL) administers the ISO/IEC JTC 1/SC 32 Secretariat on behalf of ANSI

# ISO/IEC JTC 1/SC 32 Secretariat Report - 2001-09-25

## Part 1 SC 32 BUSINESS PLAN (Part 1 is 32N0675) BUSINESS PLAN FOR ISO/IEC JTC 1/SC32, Data Management and Interchange

**PERIOD COVERED:** September 2000 to August 2001

**SUBMITTED BY:** Bruce Bargmeyer, Chairman JTC 1/SC 32

### 1. MANAGEMENT SUMMARY:

#### 1a CHAIRMAN'S REMARKS

When plenary dates for an SC and for JTC 1 are out of phase, the SC chairman's use of this section for updating JTC 1 on SC status is required as a means to reflect developments since the business plan was approved. This section may also be used for any other remarks the chairman believes pertinent in regards to the SC's Business Plan, its projects, opportunities, risks or new initiatives.

The SC 32 Plenary meeting ends the Friday before the JTC 1 committee meeting, so this business plan does not reflect the results of that meeting. It is expected that the meeting will be well attended and will continue the excellent progress described in this report.

#### 1.1 JTC 1 SC32 STATEMENT OF SCOPE

##### JTC 1/ SC 32

**Title:** Data Management and Interchange

**Area of Work:** Standards for data management within and among local and distributed information systems environments. SC 32 provides enabling technologies to promote harmonization of data management facilities across sector-specific areas. Specifically, SC 32 standards include:

- 1) reference models and frameworks for the coordination of existing and emerging standards;
- 2) definition of data domains, data types and data structures, and their associated semantics;
- 3) languages, services and protocols for persistent storage, concurrent access, concurrent update and interchange of data;
- 4) methods, languages, services and protocols to structure, organize and register metadata and other information resources associated with sharing and interoperability, including electronic commerce.

##### JTC 1/ SC 32/RG 01

**Title:** Reference Model for Data Management Maintenance

**Area of Work:** Maintenance of ISO/IEC 10032, Reference Model of Data Management, and

enhancements to it as may be required by SC 32.

## **JTC 1/ SC 32/WG 01**

**Title:** Open-edi

**Area of Work:** Standardization in the field of generic information technology standards for open electronic data interchange needed to attain global interoperability among the information technology systems used by organizations. Such interoperability is viewed from both business and information technology perspectives.

Within this context the scope includes:

- 1 methodology and framework for identification and modelling of business activities through business scenarios and their components, such as roles, information bundles, and semantic components;
- 2 identification and specification of formal description techniques for describing classes of business requirements and their contextual and semantic specifications;
- 3 identification and specification of formal description techniques for developing business scenarios and their components;
- 4 identification and specification of information technology services and service interfaces for accomplishing business transactions;
- 5 identification and specification of facilities to manage business scenarios and their components.

Note: Priority is on work required to support the needs of electronic commerce, electronic administration, electronic business, etc. The basis of work is the Open-edi Reference Model (ISO/IEC 14662).

## **JTC 1/ SC 32/WG 02**

**Title:** Metadata

**Area of Work:** To develop and maintain standards that facilitate specification and management of metadata. Use of these standards will enhance the understanding and sharing of data, information and processes to support, for example, interoperability, electronic commerce and component-based development. The scope shall include:

- a) a framework for specifying and managing metadata;
- b) specification and management of data elements, structures and their associated semantics;
- c) specification and management of value domains, such as classification and code schemes;
- d) specification and management of data about processes and behaviour;
- e) facilities to manage metadata, for example: data dictionaries, repositories, information resource dictionary systems, registries and glossaries;
- f) facilities to exchange metadata, including its semantics, over the Internet, intranets and other media.



### **JTC 1/ SC 32/WG 03**

**Title:** Database Languages

**Area of Work:** 1. To develop and maintain languages for the dynamic specification, maintenance and description of database structures and contents in multi-user and multi-server environments. The specifications may include the data types, behaviours and any integrity constraints on the contents of the defined structures. The specifications may include mechanisms for the creation and generation of new data types and behaviours so as to support the specification of other international standards.

2. To develop and maintain languages that provide for the storage, access and manipulation of data in database structures by multiple concurrent users. These languages may be computationally complete and may contain features for the packaging and storage of modules and procedures in database structures.

3. To provide interfaces for the languages developed to other standard programming languages.

4. To provide interfaces or access to other standards describing data types, behaviours or database content to users of the languages developed.

### **JTC 1/ SC 32/WG 04**

**Title:** SQL Multimedia & Application Packages

**Area of Work:** To specify packages of abstract data types for use in various application areas. Specify each package of abstract data type definitions using the facilities for user-defined type provided in the Database Language SQL/Foundation. This should include packages such as Full-Text, Spatial, Still Image, Still Graphic, Animation, Full Motion Video, Audio, Seismic, and Music.

### **JTC 1/ SC 32/WG 05**

**Title:** Database Access and Interchange

**Area of Work:** Standards to facilitate interworking of applications and databases that may be located on different sites. These standards relate principally to communications and management data. They are complementary to and dependent on standards for database languages. The activities include the analysis of distributed database applications and requirements, definition of system models, communication APIs and protocols for interworking between client systems and one or more server systems; the systems may be on different hardware, with software from different suppliers.

## **1.2 PROJECT REPORT**

### **SC 32/RG 01 Reference Model for Data Management Maintenance**

1.32.01.00.00 ISO/IEC 10032:1995

Information technology - Reference Model of Data Management

### **SC 32/WG 01 Open-edi**

- 1.32.20.01.00.00 ISO/IEC AWI 18038  
Information technology - Identification and Mapping of Various Categories of Jurisdictional Domains  
*Target Dates:* CD 2001-10 FCD 2002-07 DIS 2002-12 IS 2003-06
- 1.32.31.01.01.00 ISO/IEC FCD 15944-1  
Information technology - Business Agreement Semantic Descriptive Techniques Part 1: Business Operational Aspects of Open-edi for Implementation  
*Target Dates:* CD 1999-09 FCD 2000-12 DIS 2001-12 IS 2002-06
- 1.32.31.01.02.00 ISO/IEC AWI 15944-2  
Information technology - Business Agreement Semantic Descriptive Techniques Part 2: Registration of Scenarios and their Components  
*Target Dates:* CD 2001-06 FCD 2002-06 DIS 2003-09 IS 2004-03
- 1.32.31.01.03.00 ISO/IEC AWI 15944-3  
Information technology - Business Agreement Semantic Descriptive Techniques Part 3: Open-edi Description Techniques  
*Target Dates:* CD 2001-12 FCD 2002-06 DIS 2003-09 IS 2004-03
- 1.32.30.01.00.00 ISO/IEC 14662:1997  
Information technology - Open-Edi Reference Model

## SC 32/WG 02 Metadata

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- 1.32.10.02.00.00 ISO/IEC AWI 5218  
Information technology - Representation of human sexes (Revision of ISO 5218:1977)  
*Target Dates:* CD 2001-04 FCD 2001-04 DIS 2002-02 IS 2002-07
- 1.32.15.02.01.00 ISO/IEC AWI 11179-1  
Information Technology -- Data Management and Interchange -- Metadata Registries (MDR)  
- Part 1: Framework for the specification and standardization of administered items  
(Revision of ISO/IEC 11179-1:1999)  
*Target Dates:* CD 2001-10 FCD DIS IS
- 1.32.15.02.02.00 ISO/IEC AWI 11179-2  
Information technology -- Data Management and Interchange -- Metadata Registries (MDR)  
- Part 2: Classification for administered items (Revision of ISO/IEC 11179-2:2000)  
*Target Dates:* CD 2002-05 FCD DIS IS
- 1.32.15.02.03.00 ISO/IEC FCD 11179-3  
Information technology -- Data Management and Interchange -- Metadata Registries (MDR)  
- Part 3, Registry Metamodel (MDR3) (Revision of ISO/IEC 11179-3:1994)  
*Target Dates:* CD 2001-05 FCD 2001-11 DIS 2002-03 IS 2002-06

1.32.15.02.04.00 ISO/IEC AWI 11179-4

Information Technology -- Data Management and Interchange -- Metadata Registries (MDR)  
- Part 4: Rules and guidelines for the formulation of data definitions (Revision of  
ISO/IEC 11179-4:1995)

*Target Dates:* CD 2001-10 FCD DIS IS

1.32.15.02.05.00 ISO/IEC WD 11179-5

Information Technology -- Data Management and Interchange -- Metadata Registries (MDR)  
- Part 5: Naming and identification principles for administered items (Revision of  
ISO/IEC 11179-5:1995)

*Target Dates:* CD 2001-04 FCD DIS IS

- 1.32.15.02.06.00 ISO/IEC AWI 11179-6  
Information Technology -- Data Management and Interchange -- Metadata Registries (MDR)  
- Part 6: Registration of administered items (Revision of ISO/IEC 11179-6:1997)  
*Target Dates:* CD 2001-04 FCD DIS IS
- 1.32.16.01.00.00 ISO/IEC FPDTR 20943-1  
Information technology - Data management and interchange - Procedures for achieving  
metadata registry (MdR) content consistency - Part 1: Data elements  
*Target Dates:* CD 2001-05 FCD 2001-11 DIS 2002-03 IS 2002-06
- 1.32.16.01.02.00 ISO/IEC AWI 20943-2  
Information technology - Procedure for Achieving Data Registry Content Consistency -  
XML Structured Data  
*Target Dates:* CD 2002-05 FCD DIS IS
- 1.32.16.01.03.00 ISO/IEC AWI 20943-3  
Information technology - Procedure for Achieving Data Registry Content Consistency -  
Value Domains  
*Target Dates:* CD 2001-10 FCD DIS IS
- 1.32.17.01.00.00 ISO/IEC AWI 20944  
Information technology - Metadata Access Service  
*Target Dates:* CD 2001-10 FCD DIS IS
- 1.32.18.01.00.00 ISO/IEC WD 18022  
Information technology - IT enablement of coded domains  
*Target Dates:* CD 2001-06 FCD 2001-10 DIS 2002-07 IS 2002-10
- 1.32.21.02.00.00 ISO/IEC AWI 15452  
Information technology - Specification of Data Value Domain (revision of TR 15452:2000)  
*Target Dates:* CD 2001-10 FCD DIS IS
- 1.32.02.02.00.00 ISO TR 9007:1987  
Information processing systems - Concepts and Terminology for the Conceptual Schema and  
the Information Base
- 1.32.10.01.00.00 ISO 5218:1977  
Information interchange - Representation of human sexes
- 1.32.11.01.00.00 ISO/IEC TR 9789:1994 type 3  
Information technology - Guidelines for the organization and representation of data elements  
for data interchange - Coding methods and principles
- 1.32.14.02.01.00 ISO/IEC 6523-1:1998  
Information technology - Structure for the identification of organizations and organization  
parts - Part 1: Identification of organization schemes

1.32.14.02.02.00 ISO/IEC 6523-2:1998

Information technology - Structure for the identification of organizations and organization parts - Part 2: Registration of organization identification schemes

1.32.15.01.01.00 ISO/IEC 11179-1:1999

Information technology - Specification and standardization of data elements - Part 1: Framework for the specification and standardization of data elements

- 1.32.15.01.02.00 ISO/IEC 11179-2:2000  
Information technology - Specification and standardization of data elements - Part 2:  
Classification for data elements
- 1.32.15.01.03.00 ISO/IEC 11179-3:1994  
Information technology - Specification and standardization of data elements - Part 3: Basic  
attributes of data elements
- 1.32.15.01.04.00 ISO/IEC 11179-4:1995  
Information technology - Specification and standardization of data elements - Part 4: Rules  
and guidelines for the formulation of data definitions
- 1.32.15.01.05.00 ISO/IEC 11179-5:1995  
Information technology - Specification and standardization of data elements - Part 5: Naming  
and identification principles for data elements
- 1.32.15.01.06.00 ISO/IEC 11179-6:1997  
Information technology - Specification and standardization of data elements - Part 6:  
Registration of data elements
- 1.32.19.01.00.00 ISO/IEC 14957:1996  
Information technology - Representation of data elements values: Notation of the format
- 1.32.21.01.00.00 ISO/IEC TR 15452:2000  
Information technology - Specification of Data Value Domain
- 1.32.40.01.00.00 ISO/IEC 10027:1990  
Information technology - Information Resource Dictionary System (IRDS) Framework
- 1.32.41.01.00.00 ISO/IEC 10728:1993  
Information technology - Information Resource Dictionary Systems (IRDS) Services  
Interface
- 1.32.41.01.00.01 ISO/IEC 10728 :1993/Amd 1:1995  
Information technology - Information Resource Dictionary System (IRDS) Service Interface  
- Amendment 1: C Language Binding
- 1.32.41.01.00.02 ISO/IEC 10728 :1993/Amd 2:1996  
Information technology - Information Resource Dictionary System (IRDS) Service Interface  
- Amendment 2: Ada language binding
- 1.32.41.01.00.03 ISO/IEC 10728 :1993/Amd 3:1998  
Information technology - Information Resource Dictionary System (IRDS) Service Interface  
- Amendment 3: CORBA IDL Binding
- 1.32.41.01.00.04 ISO/IEC 10728 :1993/Amd 4:1998

Information technology - Information Resource Dictionary System (IRDS) Service Interface  
- Amendment 4: Remote Procedure Call IDL Binding

1.32.58.01.03.00 ISO/IEC 13238-3:1998

Information technology - Data Management Export/Import Facilities - Part 3: Export/Import  
Facilities for IRDS

## SC 32/WG 03 Database Languages

- 1.32.03.05.01.00 ISO/IEC CD 9075-1  
Information technology - Database Languages - SQL - Part 1: Framework  
(SQL/Framework)  
*Target Dates:* CD 2001-01 FCD 2001-08 DIS 2002-06 IS 2002-10
- 1.32.03.05.02.00 ISO/IEC CD 9075-2  
Information technology - Database Languages - SQL - Part 2: Foundation (SQL/Foundation)  
*Target Dates:* CD 2001-01 FCD 2001-08 DIS 2002-06 IS 2002-10
- 1.32.03.05.03.00 ISO/IEC CD 9075-3  
Information technology - Database Languages - SQL - Part 3: Call-Level Interface  
(SQL/CLI)  
*Target Dates:* CD 2001-01 FCD 2001-08 DIS 2002-06 IS 2002-10
- 1.32.03.05.04.00 ISO/IEC CD 9075-4  
Information technology - Database Languages - SQL - Part 4: Persistent Stored Modules  
(SQL/PSM)  
*Target Dates:* CD 2001-01 FCD 2001-08 DIS 2002-06 IS 2002-10
- 1.32.03.05.07.00 ISO/IEC WD 9075-7  
Information technology - Database Language SQL - Part 7: Temporal (for SQL:200n)  
*Target Dates:* CD 2001-11 FCD 2001-11 DIS 2002-08 IS 2002-12
- 1.32.03.05.09.00 ISO/IEC CD 9075-9  
Information technology - Database Languages - SQL - Part 9: Management of External Data  
(SQL/MED)  
*Target Dates:* CD 2001-02 FCD 2001-08 DIS 2002-06 IS 2002-10
- 1.32.03.05.10.00 ISO/IEC CD 9075-10  
Information technology --Database Languages - SQL - Part 10: Object language bindings  
(SQL/OLB)  
*Target Dates:* CD 2001-01 FCD 2001-08 DIS 2002-06 IS 2002-10
- 1.32.03.05.11.00 ISO/IEC CD 9075-11  
Information technology --Database Languages - SQL - Part 11: Information and Definition  
Schemas (SQL/Schemata)  
*Target Dates:* CD 2001-01 FCD 2001-08 DIS 2002-06 IS 2002-10
- 1.32.03.05.12.00 ISO/IEC AWI 9075-12  
Information technology --Database Language SQL - Part 12: Replication (for SQL:200n)  
*Target Dates:* CD 2001-05 FCD 2001-11 DIS 2002-08 IS 2002-12
- 1.32.03.05.13.00 ISO/IEC FCD 9075-13  
Information technology --Database Language SQL - Part 13: SQL/JRT (for SQL:200n)

*Target Dates:* CD FCD 2001-04 DIS 2002-06 IS 2002-10

1.32.03.05.14.00 ISO/IEC WD 9075-14  
Information technology --Database Language SQL - Part 14: SQL/XML (for SQL:200n)  
*Target Dates:* CD FCD 2001-07 DIS 2002-06 IS 2002-10

1.32.03.04.01.00 ISO/IEC 9075-1:1999  
Information technology - Database Language SQL - Part 1: Framework

1.32.03.04.01.01 ISO/IEC FDAM 9075 : Amd 1  
Information technology- Database languages SQL - Amendment 1: SQL/OLAP (for SQL:1999)

1.32.03.04.02.00 ISO/IEC 9075-2:1999  
Information technology - Database Language SQL - Part 2: Foundation (SQL:1999)

1.32.03.04.03.00 ISO/IEC 9075-3:1999  
Information technology - Database Language SQL - Part 3: Call-Level Interface

1.32.03.04.04.00 ISO/IEC 9075-4:1999  
Information technology - Database Language SQL - Part 4: Persistent Stored Modules

1.32.03.04.05.00 ISO/IEC 9075-5:1999  
Information technology - Database Language SQL - Part 5: Language Bindings

1.32.03.04.09.00 ISO/IEC 9075-9:2001  
Information technology - Database Language SQL - Part 9: Management of External Data

1.32.03.04.10.00 ISO/IEC 9075-10:2000  
Information technology --Database Language SQL - Part 10: Object language bindings (for SQL:1999)

1.32.03.04.99.00 ISO/IEC 9075:1999/Cor 1  
Information technology- Database languages - SQL - Technical Corrigendum 1 for SQL:1999/Cor 1:2000

## **SC 32/WG 04 SQL Multimedia & Application Packages**

1.32.04.01.06.00 ISO/IEC FCD 13249-6  
Information technology - Database languages - SQL Multimedia and Application Packages - Part 6: Data Mining  
*Target Dates:* CD 2000-12 FCD 2001-07 DIS 2002-04 IS 2002-08

1.32.04.02.01.00 ISO/IEC AWI 13249-1  
Information technology - SQL Multimedia and Application Packages - Part 1: Framework

- 2nd ed.  
*Target Dates:* CD 2001-05 FCD 2001-07 DIS 2002-04 IS 2002-08
- 1.32.04.02.02.00 ISO/IEC CD 13249-2  
 Information technology - SQL Multimedia and Application Packages - Part 2: Full-Text  
 (Revision of ISO/IEC DIS 13249-2)  
*Target Dates:* CD 2001-06 FCD 2001-12 DIS 2002-09 IS 2002-12
- 1.32.04.02.03.00 ISO/IEC CD 13249-3  
 Information technology - SQL Multimedia and Application Packages - Part 3: Spatial 2nd  
 Edition  
*Target Dates:* CD 2001-06 FCD 2001-12 DIS 2002-09 IS 2002-12
- 1.32.04.02.05.00 ISO/IEC CD 13249-5  
 Information technology - SQL Multimedia and Application Packages - Part 5: Still Image  
 2nd  
*Target Dates:* CD 2001-06 FCD 2001-12 DIS 2002-09 IS 2002-12
- 1.32.04.01.01.00 ISO/IEC13249-1:2000  
 Information technology - SQL Multimedia and Application Packages - Part 1: Framework
- 1.32.04.01.02.00 ISO/IEC13249-2:2000  
 Information technology - SQL Multimedia and Application Packages - Part 2: Full -Text
- 1.32.04.01.03.00 ISO/IEC 13249-3:1999  
 Information technology - SQL Multimedia and Application Packages - Part 3: Spatial
- 1.32.04.01.05.00 ISO/IEC 13249-5:2001  
 Information technology - SQL Multimedia and Application Packages - Part 5: Still Image

## **SC 32/WG 05 Database Access and Interchange**

- 1.32.05.03.00.00 ISO/IEC FCD 9579 edition 3  
 Information technology - Remote database access for SQL (RDA/SQL) - Edition 3 (for SQL  
 1999)  
*Target Dates:* CD FCD 1998-09 DIS 2000-12 IS 2001-06
- 1.32.05.03.00.01 ISO/IEC CD 9579 ed 3 amd 1  
 Information technology - Remote Database Access for SQL: XML Encoding Amendment to  
 Edition 3  
*Target Dates:* CD 2001-06 FCD 2001-12 DIS 2002-10 IS 2003-02
- 1.32.05.03.00.02 ISO/IEC CD 9579 ed 3 amd 2  
 Information technology - Remote Database Access for SQL: Support for SQL/MED  
 Amendment 2 to Edition 3

*Target Dates:* CD 2001-12 FCD 2002-07 DIS 2002-12 IS 2003-02

1.32.05.04.00.00 ISO/IEC CD 9579 ed 4

Information technology - Remote Database Access for SQL: (RDA/SQL). Edition 4

*Target Dates:* CD 2000-10 FCD 2001-04 DIS 2001-10 IS 2002-02

1.32.53.01.02.00 ISO/IEC CD 20606-1

Information technology - Data Management and Interchange – Authorization and Audit

*Target Dates:* CD FCD 2001-04 DIS 2001-10 IS 2002-02

1.32.53.01.03.00 ISO/IEC CD 20606-2

Information technology - Data Management and Interchange - Distribution Schema

*Target Dates:* CD 2000-05 FCD DIS IS

1.32.53.01.04.00 ISO/IEC AWI 20606-3

Information technology - Data Management and Interchange - Encompassing Transaction

*Target Dates:* CD 2000-10 FCD 2001-04 DIS 2001-10 IS 2002-02

1.32.58.01.01.00 ISO/IEC FCD 13238-1

Information technology - Data Management Export/Import Facilities - Part 1:  
Standardization Framework

*Target Dates:* CD 1997-09 FCD 2000-10 DIS 2000-11 IS 2001-09

1.32.05.02.00.00 ISO/IEC9579:2000 ed 2

Information technology - Remote database access for SQL (RDA/SQL). Edition 2.

### **1.3 COOPERATION AND COMPETITION**

A complete listing of SC 32 liaisons is listed in the following tables. SC 32 is continually reevaluating its liaisons and assessing areas of internal and external cooperation and competition. SC 32 has requested JTC 1 to remove the liaisons that have not expressed an interest in the work of SC 32.

## Internal Liaison Membership

CEN/ISSS EC	Information Society Standardization System
CEN/ISSS MM	Information Society Standardization System
CEN/TC 310 AMT	Advanced Manufacturing Technologies
IEC 93	Design Automation
ISO/IEC JTC 1/SC 2	Coded character sets
ISO/IEC JTC 1/SC 6	Telecommunications and information exchange between systems
ISO/IEC JTC 1/SC 7	Software Engineering
ISO/IEC JTC 1/SC 7/WG 11	Software engineering/Life cycle management
ISO/IEC JTC 1/SC 22	Programming languages
ISO/IEC JTC 1/SC 22/WG 20	Programming languages/Internationalization
ISO/IEC JTC 1/SC 24	Computer Graphics and Image Processing
ISO/IEC JTC 1/SC 25/WG 1	Home Electronic Systems
ISO/IEC JTC 1/SC 27	IT Security Techniques
ISO/IEC JTC 1/SC 29	Coding of audio, picture, multimedia and hypermedia information
ISO/IEC JTC 1/SC 31	Automatic identification and data capture techniques
ISO/IEC JTC 1/SC 34	Document Description and Processing Languages
ISO/IEC JTC 1/SC 35	User Interfaces
ISO/IEC JTC 1/SC 36	Information Technology for Learning, Education & Training
ISO/TC 12	Quantities, units, symbols, conversion factors
ISO/TC 23/SC 19	Tractors and Machinery for agriculture and forestry/Agricultural electronics
ISO/TC 37	Terminology (principles and coordination)
ISO/TC 37/SC 3	Terminology/Computer Applications
ISO/TC 46	Information and documentation
ISO/TC 46/SC 3	Information and documentation/ Terminology
ISO/TC 46/SC 4	Information and documentation/Computer applications
ISO/TC 46/WG 2	Information and documentation/Coding of country names and related entities
ISO/TC 68	Banking, securities and other financial services
ISO/TC 68/SC 2	Banking, securities and other financial services/ Security management
ISO/TC 154	Documents and data elements in administration, commerce and industry
ISO/TC 184	Industrial automation systems and integration
ISO/TC 184/SC 4	Industrial automation systems and integration/ Industrial data
ISO/TC 204	Transport Information and Control Systems
ISO/TC 211	Geographic information/Geomatics
ISO/TC 215	Healthcare Informatics

## External Liaison Membership Category - A

INTELSAT	International Telecommunications Satellite Organization
ISBT	International Society of Blood Transfusion
ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
SITA	Societe Internationale de Telecommunications Aeronautiques (Airline Telecommunications & Information)
UN/ECE/CEFACT	UN/Economic Commission for Europe/CEFACT
UNCTAD	United Nations Conference of Trade and Development

## External Liaison Membership Category - B

CEPT	European Conference of Postal and Telecommunications Administrations
CERN	European Organization for Nuclear Research
CISAC	International Confederation of Societies of Authors and Composers
ECMA	An International Europe-based Industry Association for Standardizing Information and Communications
ESA	European Space Agency
ETDE	Energy Technology Data Exchange
EWICS	European Workshop on Industrial Computer Systems
IFIP	International Federation for Information Processing
IPTC	International Press Telecommunications Council
SWIFT	Society for Worldwide Interbank Financial Telecommunication
UNESA	UN-Under-Secretary for Economic and Social Affairs
UPU	Universal Postal Union
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization

## **External Liaison Membership Category - C**

DCMI	Dublin Core Metadata Initiative
EXPERTNET/SA	ExpertnetSA MEDSEC (Health Care Security and Privacy in the Information Society)
IEEE LTSC	Learning Technology Standards Committee
OG	Open Group
OGC	Open GIS Consortium
OMG	Object Management Group
W3C	World Wide Web Consortium

## **2.0 PERIOD REVIEW**

Excellent progress has been made in developing SQL, SQL MM, RDA, Open-Edi, Metadata Registry standards, and we expect that progress to continue in the future. Excellent progress has been made in developing SQL. The remaining parts of the SQL:1999 standards have been completed. An aggressive schedule for the next complete revision of ISO/IEC 9075 has been set with a target end date of 1<sup>st</sup> quarter 2003.

## **2.1 MARKET REQUIREMENTS**

Market requirements for SC 32 standards are driven by the rapid pace of hardware and software advancement as well as by the explosive growth of Internet/Intranet/Extranet applications. These drive a stream of market requirements that are addressed by SC 32 standards for data management and interchange, including metadata management. The data management market continues to grow rapidly in line with the geometric increase in the volume of data stored and served. Technologies such as XML provide some competition to SC 32 standards, but also offer large opportunities to reach new markets by accommodating the new technologies or by taking a lead in collaborative development of the new technologies. SC 32 members are deeply involved in development of W3C XML recommendations (e.g., XML-Schema and XML-Query) and it would be desirable to position SC 32 as the appropriate JTC 1 committee for progressing these W3C recommendations to become ISO standards.

An SC 32 study period has found an increasing market demand for semantics management. This is needed for data in databases, EDI messages, text in documents (which may be stored in databases), etc. While there are several ISO standards for various terminology content and structure, there is little connection between those standards and their potential use for data management and interchange. SC 32 is exploring the market requirements for semantics management and the existing standards in order to articulate and then fill the unmet need. Users are driving the market demand for metadata registries that describe the structure and meaning data. Major organizations are implementing metadata registries according to SC 32 standards and in the process are creating demand for extensions and broader coverage. This work is especially driven by the public access requirements of users and by market forces requiring the capability to share metadata between organizations.

The market demand for SQL database products remains strong. The clear acceptance of the new SQL:1999 standards by the database vendors is very encouraging. The development of new parts and new features within the 9075 family of standards continues to be driven by perceived market priorities; the effort applied and the scheduling of the various parts has been adjusted accordingly.

Market demand of EDI and electronic commerce products grows as firms struggle to move into the electronic marketplace. Standards for EDI functions are necessary to facilitate this demand.

The SC 32 work related to Open edi work and metadata registries is supporting JTC 1 involvement with the ISO IEC UN/ECE MoU Management Group. Each part of SQL/MM standards is based on explicit requirements from a domain market. Especially, SQL/MM Part 2: Spatial specifying Spatial Data Management received much attention from TC 204, TC 211, and OGC (Open GIS Consortium) and is being developed under close coordination with TC 211 and OGC. Thus, we believe that our standards meet real market requirements.

## 2.2 ACHIEVEMENTS

The following projects have completed or are in Stage 5 – Publication

- 1.32.03.04.09.00 ISO/IEC 9075-9:2001 Information technology - Database Language SQL - Part 9: Management of External Data
- 1.32.03.04.10.00 ISO/IEC 9075-10:2000 Information technology --Database Language SQL - Part 10: Object language bindings (for SQL:1999)
- 1.32.04.01.01.00 ISO/IEC13249-1:2000 Information technology - SQL Multimedia and Application Packages - Part 1: Framework
- 1.32.04.01.02.00 ISO/IEC13249-2:2000 Information technology - SQL Multimedia and Application Packages - Part 2: Full -Text
- 1.32.04.01.05.00 ISO/IEC 13249-5:2001 Information technology - SQL Multimedia and Application Packages - Part 5: Still Image

The following projects are completing Stage 4 – Approval Stage by being submitted to ITTF for final vote.

The following project completed Stage 3 – Committee Stage with FCD ballot

- 1.32.31.01.01.00 ISO/IEC FCD 15944-1 Information technology - Business Agreement Semantic Descriptive Techniques Part 1: Business Operational Aspects of Open-edi for Implementation
- 1.32.03.05.13.00 ISO/IEC FCD 9075-13 Information technology --Database Language SQL - Part 13: SQL/JRT (for SQL:200n)
- 1.32.58.01.01.00 ISO/IEC FCD 13238-1 Information technology - Data Management Export/Import Facilities - Part 1: Standardization Framework

The following project progressing Stage 3 – Committee Stage with FCD ballot

- 1.32.15.02.03.00 ISO/IEC FCD 11179-3 Information technology -- Data Management and Interchange -- Metadata Registries (MDR) - Part 3, Registry Metamodel (MDR3)
- 1.32.16.01.00.00 ISO/IEC FPDTR 20943-1 Information technology - Data management and interchange - Procedures for achieving metadata registry (Mdr) content consistency - Part 1: Data elements
- 1.32.04.01.06.00 ISO/IEC FCD 13249-6 Information technology - Database languages - SQL Multimedia and Application Packages - Part 6: Data Mining

The following project is progressing in Stage 3 – Committee Stage

- 1.32.03.05.01.00 ISO/IEC CD 9075-1 Information technology - Database Languages - SQL - Part 1: Framework (SQL/Framework)
- 1.32.03.05.02.00 ISO/IEC CD 9075-2 Information technology - Database Languages -

- SQL - Part 2: Foundation (SQL/Foundation)
- 1.32.03.05.03.00 ISO/IEC CD 9075-3 Information technology - Database Languages - SQL - Part 3: Call-Level Interface (SQL/CLI)
- 1.32.03.05.04.00 ISO/IEC CD 9075-4 Information technology - Database Languages - SQL - Part 4: Persistent Stored Modules (SQL/PSM)
- 1.32.03.05.09.00 ISO/IEC CD 9075-9 Information technology - Database Languages - SQL - Part 9: Management of External Data (SQL/MED)
- 1.32.03.05.10.00 ISO/IEC CD 9075-10 Information technology --Database Languages - SQL - Part 10: Object language bindings (SQL/OLB)
- 1.32.03.05.11.00 ISO/IEC CD 9075-11 Information technology --Database Languages - SQL - Part 11: Information and Definition Schemas (SQL/Schemata)
- 1.32.04.02.02.00 ISO/IEC CD 13249-2 Information technology - SQL Multimedia and Application Packages - Part 2: Full-Text
- 1.32.04.02.03.00 ISO/IEC CD 13249-3 Information technology - SQL Multimedia and Application Packages - Part 3: Spatial 2nd Edition
- 1.32.04.02.05.00 ISO/IEC CD 13249-5 Information technology - SQL Multimedia and Application Packages - Part 5: Still Image 2nd

## **2.3 RESOURCES**

Adequate resources are currently available for all Database Languages (WG 3) projects.

## **3.0 FOCUS NEXT WORK PERIOD**

SC 32 has refined its program of work to ensure that it is focusing on those standards that will meet market requirements. SC 32 plans to continue to focus on developing standards for SQL, SQL/MM, Open edi and data semantics. SQL work is expected to be particularly active. The metadata registry market is becoming active with implementations of ISO/IEC 11179.

Database Languages (WG 3) work is active with the focus on a completely revised set of ISO/IEC 9075 parts as well as two new parts addressing more Java support and XML support.

The Open-Edi (WG 1) is concentrating on their ISO/IEC 15944-1 Information technology - Business Agreement Semantic Descriptive Techniques Part 1: Business Operational Aspects of Open-edi for Implementation and ISO/IEC 18038 Identification, mapping and IT-enablement of existing standards for widely used encodable value domains. A key characteristic of commerce world-wide is that it makes extensive use of enumerated lists, code sets, etc. representing possible choices of common aspects in business transactions. The problem is that most of these code sets in use world-wide are paper-based and, even if available in electronic form, lack a computer-processable version. The objective of this standardization work is (1) the development of a tool to facilitate the creation of IT-enabled versions of existing sets of “codes representing X”, and (2) to do so, in a manner which will support localization and multilingual requirements of the marketplace.

The Metadata Working Group (WG 2) is progressing the metadata registries with revisions to the ISO/IEC 11179 family of metadata registry standards. Part 3 of ISO/IEC 11179, sent out for FCD ballot, is being revised to incorporate a structure of a metadata registry. Technical reports on metadata registry content are progressing. The content TR addresses the exchange of metadata among ISO/IEC 11179-based registries that depends not only on standard-conforming software, but also on contents that are compatible across registries. The goal of this project is to produce Technical Reports that will promote a common understanding of the content of metadata registry data elements so that they can be shared among registries. The intent is to provide guidance by example in registering data elements. WG 2 intends to recommend using XML for accessing and interchanging information in 11179 conformant data registries. We expect that specific XML tags and data structures will be algorithmically derived from the normative UML data model specified in 11179 part 3. The Object Management Group (OMG) has already adopted a standard for XMI (XML Model Interchange), which we expect to recommend as one mechanism for such algorithmic derivation of XML representation from UML models. Work is also underway to foster interoperability between ISO/IEC 11179 metadata registries, XML registries, Universal Description, Discovery and Integration (UDDI) registries, database catalogs, ontology registries and CASE tool repositories. The SC 32 work is positioned to meet the deeper semantic management aspects of data management and interchange.

### **3.1 DELIVERABLES:**

See section 1.2 for those projects with upcoming target dates.

### **3.2 STRATEGIES:**

SC 32 is focused on progressing its program of work as quickly and efficiently as possible. It is important that the committee keep its focus on meeting market requirements, and emphasize new projects that have well-defined, concrete objectives that are market driven.

The SC 32 management approach is that everything that can be delegated to a WG, per JTC 1 directives, will be delegated to the WG along with the relevant authority and responsibility. The SC does not impose any additional management overhead. SC 32 Plenary meetings accomplish those tasks required by the JTC 1 directives in as brief a time as possible. Discussions are invited during a tutorial meeting and anytime outside of Plenary. All contentious issues are identified in advance and groups appointed to resolve the issue and prepare a recommendation before the Plenary. This strategy is intended to make the WGs as productive as their members can be.

WG 2 has initiated electronic Working Group meetings. WG3 has had one completely electronic-WG meeting and a completely electronic-continuation-editing meeting in order to progress the work as fast as possible.

#### **3.2.1 RISKS**

SC 32 is the result of JTC 1 creating a new Technical Direction on Data Management and Interchange, and is a combination of three committees with different traditions, work programs and personalities. Each of these three groups had their own priorities, and different strategies for

achieving their objectives. During the first meetings, SC 32 successfully formulated a new working structure, scope and title. Considerable progress was made in identifying and establishing critical inter- and intra-group understanding and liaisons. While the first priority of the participants was to progress the standards proposals that came into the re-engineered SC 32, current attention is turning to developing new standards that cut across the original organizational lines. Considerable effort is being given to avoid isolated work within the WGs. At current SC 32 meetings, each WG gives a tutorial on its work to the full committee. There is always the risk that new project could be initiated that does not have clear objectives and concrete specifications. If this occurs, SC 32 will dilute its focus and create incentive to produce important standards outside of SC 32 and JTC 1.

Overlapping scope of projects is an area that needs to be continually monitored and controlled. Changes in market requirements and ability to schedule plenary sessions at the appropriate moment may cause some perturbation in the work schedules.

TC 211 is now progressing OGC's Simple Feature Access SQL (SFA SQL). SFA SQL can be regarded as mere subset of SQL/MM Part 2: Spatial. Their aim is quick adaptation of SFA SQL specification under current DBMS environments. The next edition of SFA SQL should coincide with SQL/MM Part 2. However, if we lose technology leadership, we may lose control.

Therefore, rapid development of the next edition is crucial factor of future success.

If SC 32 does not pursue its work aggressively, risks exist that essential capabilities will not be available in the marketplace to support important functions, or that the marketplace will produce multiple incompatible solutions in areas that common approaches and interoperability are essential to users.

The delegation of authority and responsibility to the WGs stands in contrast to the working of some of the SC/WG relationships that came into SC 32. This management style makes some participants uncomfortable, since it limits discussion time in Plenary meetings. There is a risk of missing some viewpoints that might be expressed in longer Plenary meetings.

SC 32 continues to have funding support problems for the Secretariat. Funds have been provided in limited increments without any long-term provision for continuation.

### **3.2.2 OPPORTUNITIES**

The Internet, electronic commerce, semantics management, object technologies, and XML represent major areas of opportunity where market forces are creating demand for SC 32 standards. We will continue to work with the others involved to identify the specific standardization needs and to respond with current and newly proposed standards.

XML represents a major area of opportunity where market forces are creating demand for standards and SC 32 is continually monitoring the work in this area and will react as soon as it sees and appropriate opportunity.

### **3.3 WORK PROGRAMME PRIORITIES**

Each WG establishes work programme priorities in their project plan, which is approved in the SC 32 Plenary. These can be seen in the material, above. For example, high priority is given to the standardization of an integrated/interoperable information processing environment.

The SC has established a priority of educating each working group about the work and ideas of the other work groups. The prior SC 32 meetings have shown that there is considerable interest

in the synergy that can be developed within the committee. The next SC 32 meeting will again include tutorials from each work group.

#### 4.0 PERFORMANCE

##### JTC 1/SC 32 Performance (as of 2001-08-01)

SC 32 METRIC	1997	1998	1999	2000	2001	2002
Attendance at Meetings <sup>1,7</sup>	N/A	47 <sup>6</sup>	57	73		
New Standards Published <sup>2</sup>	2	4	8	4	5	
Total Standards Published <sup>3</sup>	N/A	23	31	28	34	
Active Projects <sup>4</sup>	N/A	40	42	38	44	
New Projects <sup>5</sup>	N/A	0	4	4	0	

<sup>1</sup>Average Meeting Attendance at Plenaries and Working Groups (where a plenary include a meeting of all working groups – if working groups do not meet during plenary meetings, a cumulative mean attendance to working group meeting should be used) (**Att. Plena.**)

<sup>2</sup>New Standards published (**NSP**)

<sup>3</sup>Total standards published (and currently valid) (**TSP**)

<sup>4</sup>Active projects (**AP**)

<sup>5</sup>New projects introduced (**NP**)

<sup>6</sup>This does not include the first Planning meeting of JTC 1/SC 32 in February 1998

<sup>7</sup>At the National Body level the Working Groups are obtaining considerable participation with electronic participation

## Part 2 SC 32 Secretariat Report

### 2.1 P- and O-members and liaisons with other international organizations;

P - Participating National Body

O - Observer National Body

#### P

Category / National Body	Organization	Web Link
Australia	SAA	www.standards.com.au
Belgium	IBN	www.ibn.be
Brazil	ABNT	www.abnt.org.br
Canada	SCC	www.scc.ca
China	CSBTS	www.csbts.cn.net
Czech Republic	COSMT	www.csni.cz
Denmark	DS	www.ds.dk
Finland	SFS	www.sfs.fi
France	AFNOR	www.afnor.fr
Germany	DIN	www.din.de
Italy	UNI	www.uninfo.polito.it
Japan	JISC	www.aist.go.jp/jisc/htm/jisc00.htm www.jisc.org/
Korea, Republic of	KNITQ	www.nitq.go.kr
Netherlands, The	NNI	www.nni.nl
Norway	NSF	www.standard.no www.nts.no/it
Sweden	ITS	www.sis.se
United Kingdom	BSI	http://www.bsi-global.com
USA	ANSI	www.ansi.org

#### O

Category / National Body	Organization	Web Link
Austria	ASI	www.on-norm.at
Russian Federation	GOST R	www.gost.ru

### JTC 1/SC 32 Internal Liaisons

ISO/IEC or CEN	Organization	Topic	Date Confirmed
Liaison from SC 32	Liaison to SC 32	E-Mail	
CEN/ISSS EC	Information Society Standardization System Luc Van den Berghe	Electronic Commerce	1998-10-15 luc.vandenbergh@cenorm.be
CEN/ISSS MM	Information Society Standardization System Luc Van den Berghe	Metadata for Multimedia	1998-10-15 luc.vandenbergh@cenorm.be
CEN/TC 310 AMT	Advanced Manufacturing Technologies Paul Leadbeater	Data	paul_leadbeater@bsi.org.uk
IEC 93	Design Automation Greg Ledenbach		greg.w.ledenbach@intel.com
ISO/IEC JTC 1/SC 2 Kohji Shibano (WG 4)	Coded character sets Kohji Shibano	Coded character sets	1998-10-16 kimura@itscj.ipsj.or.jp
ISO/IEC JTC 1/SC 6	Telecommunications and information exchange between systems Jean Shildneck	ASN.1	jshildne@ansi.org
ISO/IEC JTC 1/SC 7 Mike Newton	Software Engineering Jean-Norman Drouin	ODP Enterprise Viewpoint Reference Model (RM-ODP)	sc7@qc.bell.ca
ISO/IEC JTC 1/SC Jean Berube (RG2)	Software engineering/Life cycle management Jean Berube	Data definition and representation	jberube@ibm.net

ISO/IEC JTC 1/SC 22	Programming languages			1998-10-15
	Frank Farance (WG2)	Isak Korn	isak@image.dk	
ISO/IEC JTC 1/SC	Programming languages/Internationalization			1998-10-15
	Jim Melton (WG3)	Arnold Winkler	Internationalization arnold.winkler@unisys.com	
ISO/IEC JTC 1/SC 24	Computer Graphics and Image Processing			
	Open (WG4)	Mr Carlson		
ISO/IEC JTC 1/SC	Home Electronic Systems			
	Frank Farance (WG 2)		Liaison is being justified and requested	
ISO/IEC JTC 1/SC 27	IT Security Techniques			
	Bruce Catley (WG5)	Krystyna Passia	IT Security Techniques passia@ni.din.de	
ISO/IEC JTC 1/SC 29	Coding of audio, picture, multimedia and hypermedia information			1999-10-21
		Ms. Yukiko Ogura	ogura@itscj.ipsj.or.jp	
ISO/IEC JTC 1/SC 31	Automatic identification and data capture techniques			1999-01-21
	Sandra K. Paul (WG1)	Maria Schneider	mschneider@mail.uc-council.org	
ISO/IEC JTC 1/SC 34	Document Description and Processing Languages			
	Mike Brough (WG 2)		SGML masonjd@ornl.gov	
	Jim Melton (WG 3)			
ISO/IEC JTC 1/SC 35	User Interfaces			2001-01-03
	Jake Knoppers (WG 1, WG 2)	Jake Knoppers	interfaces between users and system France.lafargue@email.afnor.fr	
ISO/IEC JTC 1/SC 36	Information Technology for Learning, Education & Training			
	Frank Farance (WG 2)	Frank Farance	Learning technology & Regirstry	
ISO/TC 12	Quantities, units, symbols, conversion factors			
			anders.j.thor@stg.se	
ISO/TC 23/SC 19	Tractors and Machinery for agriculture and forestry/Agricultural electronics			
			zen_lav@vdma.org	
ISO/TC 37	Terminology (principles and coordination)			
	Jake Knoppers (WG1)	Mrs C Galinski,		
	Jake Knoppers WG2)	ON Austria	cgalinski@infoterm.org	
ISO/TC 37/SC 3	Terminology/Computer Applications			
		Mr. Gotfried Herzog, DIN German	Herzog@NABD.DIN.DE	
ISO/TC 46	Information and documentation			1998-10-30
		Mme Catherine Mattenet AFNOR	catherine.mattenet@afnor.fr	
ISO/TC 46/SC 3	Information and documentation/ Terminology			1998-10-30
			isiri.infoc@neda.net	
ISO/TC 46/SC 4	Information and documentation/Computer applications			
		Pat Harris (NISO)	pharris@cni.org	
ISO/TC 46/WG 2	Information and documentation/Coding of country names and related entities			1998-10-30
	Jake Knoppers (WG1)		Documents received thru TC 46	
	Jake Knoppers (WG2)			
ISO/TC 68	Banking, securities and other financial services			
			cfuller@aba.com	
ISO/TC 68/SC 2	Banking, securities and other financial services/ Security management			
			cfuller@aba.com	

ISO/TC 154	Documents and data elements in administration, commerce and industry	Basic Semantic Repository Hennig@NBUE.DIN.DE
ISO/TC 184	Industrial automation systems and integration Mrs. Christine Hermetet-Filez, AFNOR France	Christine.hermetet-filez@email.afnor.fr
ISO/TC 184/SC 4	Industrial automation systems and integration/ Industrial data Mrs. Christine Hermetet-Filez, AFNOR France	sc4sec@cme.nist.gov
ISO/TC 204	Transport Information and Control Systems Andy Schoka (WG2) Paul Scarponcini (WG4)	Transportation, Spatial, & Registry 1998-10-15 arlan@sae.org / jbrandt@sae.org
ISO/TC 211	Geographic information/Geomatics Martin Ford (WG2) Martin Ford (WG4) Jake Knoppers (WG 1) Jake Knoppers (WG 2) Shojiro Tanaka (WG 4)	Geographic Information 19981016 bjs@nts.no / jrherrin@us.oracle.com
ISO/TC 215	Healthcare Informatics Joe Christensen (WG2) Christopher Sedlacek	Healthcare Informatics csedlace@astm.org

## JTC1/SC 32 External Liaisons

Organization		Topic E-mail	Date Confirmed
<b>Category : A</b> INTELSAT	<b>Liaison from SC 32</b> <b>Liaisons</b> International Telecommunications Satellite Organization		19981026
	<b>Liaison to SC 32</b> Tokuo Oishi Colin Amor	colin.amor@intelsat.int	
ISBT	International Society of Blood Transfusion WG 2		
ITU-T Wolfgang Wollleber	International Telecommunication Union - Telecommunication Standardization Sector	Conceptual Schema Modelling tsbedh@itu.int	
SITA	Societe Internationale de Telecommunications Aeronautiques (Airline Telecommunications & Information)		
UN/ECE/CEFACT	UN/Economic Commission for Europe/CEFACT Klaus-Dieter Naujok		
UNCTAD	United Nations Conference of Trade and Development		
<b>Category : B</b> CEPT	<b>Liaisons</b> European Conference of Postal and Telecommunications Administrations		
CERN	European Organization for Nuclear Research		
CISAC	International Confederation of Societies of Authors and Composers Dominique Yon	Cisac@cisac.org	19981202
ECMA	An International Europe-based Industry Association for Standardizing Information and Communications		



## 2.2 SC 32 Organization

### SC 32 Data Management and Interchange

Standards for data management within and among local and distributed information systems environments. SC 32 provides enabling technologies to promote harmonization of data management facilities across sector-specific areas. Specifically, SC 32 standards include:

- 1) reference models and frameworks for the coordination of existing and emerging standards;
- 2) definition of data domains, data types and data structures, and their associated semantics;
- 3) languages, services and protocols for persistent storage, concurrent access, concurrent update and interchange of data;
- 4) methods, languages, services and protocols to structure, organize and register metadata and other information resources associated with sharing and interoperability, including electronic commerce.

**Web** : <http://www.jtc1sc32.org>

**News Email** : [SC32-news@nist.gov](mailto:SC32-news@nist.gov)

**Ftp** :

### SC 32/WG 01 Open-edi

Standardization in the field of generic information technology standards for open electronic data interchange needed to attain global interoperability among the information technology systems used by organizations. Such interoperability is viewed from both business and information technology perspectives.

Within this context the scope includes:

- 1 methodology and framework for identification and modelling of business activities through business scenarios and their components, such as roles, information bundles, and semantic components;
- 2 identification and specification of formal description techniques for describing classes of business requirements and their contextual and semantic specifications;
- 3 identification and specification of formal description techniques for developing business scenarios and their components;
- 4 identification and specification of information technology services and service interfaces for accomplishing business transactions;
- 5 identification and specification of facilities to manage business scenarios and their components.

Note: Priority is on work required to support the needs of electronic commerce, electronic administration, electronic business, etc. The basis of work is the Open-edi Reference Model (ISO/IEC 14662).

**Web** : [www.tieke.fi/sc32wg1](http://www.tieke.fi/sc32wg1)

**News Email** :

**Ftp** :

### SC 32/WG 02 Metadata

To develop and maintain standards that facilitate specification and management of metadata. Use of these standards will enhance the understanding and sharing of data, information and processes to support, for example, interoperability, electronic commerce and component-based development. The scope shall include:

- a) a framework for specifying and managing metadata;
- b) specification and management of data elements, structures and their associated semantics;
- c) specification and management of value domains, such as classification and code schemes;
- d) specification and management of data about processes and behaviour;
- e) facilities to manage metadata, for example: data dictionaries, repositories, information resource dictionary systems, registries and glossaries;

f) facilities to exchange metadata, including its semantics, over the Internet, intranets and other

**Web :** [www.metadata.aihw.gov.au](http://www.metadata.aihw.gov.au)

**News Email :** [SC32WG2-news@nist.gov](mailto:SC32WG2-news@nist.gov)

**Ftp :** <ftp://www.sdct.itl.nist.gov/x318/sc32wg2>

### **SC 32/WG 03 Database Languages**

1. To develop and maintain languages for the dynamic specification, maintenance and description of database structures and contents in multi-user and multi-server environments. The specifications may include the data types, behaviours and any integrity constraints on the contents of the defined structures. The specifications may include mechanisms for the creation and generation of new data types and behaviours so as to support the specification of other international standards.

2. To develop and maintain languages that provide for the storage, access and manipulation of data in database structures by multiple concurrent users. These languages may be computationally complete and may contain features for the packaging and storage of modules and procedures in database structures.

3. To provide interfaces for the languages developed to other standard programming languages.

4. To provide interfaces or access to other standards describing data types, behaviours or database content to users of the languages developed.

**Web :**

**News Email :**

**Ftp :** <ftp://jerry.ece.umassd.edu/SC32/WG3>

### **SC 32/WG 04 SQL Multimedia & Application Packages**

To specify packages of abstract data types for use in various application areas. Specify each package of abstract data type definitions using the facilities for user-defined type provided in the Database Language SQL/Foundation. This should include packages such as Full-Text, Spatial, Still Image, Still Graphic, Animation, Full Motion Video, Audio, Seismic, and Music.

**Web :**

**News Email :**

**Ftp :**

### **SC 32/WG 05 Database Access and Interchange**

Standards to facilitate interworking of applications and databases that may be located on different sites. These standards relate principally to communications and management data. They are complementary to and dependent on standards for database languages. The activities include the analysis of distributed database applications and requirements, definition of system models, communication APIs and protocols for interworking between client systems and one or more server systems; the systems may be on different hardware, with software from different suppliers.

**Web :** [www.sc32wg5.freemove.co.uk](http://www.sc32wg5.freemove.co.uk)

**News Email :**

**Ftp :**

### **SC 32/RG 01 Reference Model for Data Management Maintenance**

Maintenance of ISO/IEC 10032, Reference Model of Data Management, and enhancements to it as may be required by SC 32.

**Web :**

**News Email :**

**Ftp :**

## 2.3 SC32 Projects

SC/WG Project Project Title	Project Editor	ISO/IEC Design Document			Reference Document	
		NP TARGET ACTUAL	CD TARGET ACTUAL	FCD TARGET ACTUAL	FDIS TARGET ACTUAL	IS TARGET ACTUAL
<b>SC 32/RG 01 Reference Model for Data Management Maintenance</b>						
SC 32/RG 01	Schnarr, Rick	NP	CD	FCD	FDIS	IS
1.32.01.01.00.00	[ 17995 / 90.60 ]					Published 1995-05
Information technology - Reference Model of Data Management						
<b>SC 32/WG 01 Open-edi</b>						
SC 32/WG 01	Levine, Paul	NP	CD	FCD	FDIS	IS
1.32.31.01.01.00	[ 33322 / 40.20 ]					32N0659
Information technology - Business Agreement			1999-09	2000-12	2001-12	FDIS to ITTF 2001-08-15
Semantic Descriptive Techniques Part 1: Business Operational Aspects of Open-edi for Implementation			2000-07	2001-02	2001-08	2002-06
SC 32/WG 01	Levine, Paul					
1.32.31.01.02.00	[ 33324 / 20.00 ]					WD 2001-08
Information technology - Business Agreement			2001-06	2002-06	2003-09	2004-03
Semantic Descriptive Techniques Part 2: Registration of Scenarios and their Components						
SC 32/WG 01	Levine, Paul					
1.32.31.01.03.00	[ 33325 / 20.00 ]					CD expected 2001-12
Information technology - Business Agreement			2001-12	2002-06	2003-09	2004-03
Semantic Descriptive Techniques Part 3: Open-edi Description Techniques						
SC 32/WG 01	McCarthy, William					
1.32.31.01.04.00	[ / 10.00 ]					
Information technology - Business Agreement						
Semantic Descriptive Techniques Part 4: Business Transaction Scenarios - Accounting and Economic Ontology						
SC 32/WG 01	Pelkonen, Hannu					
1.32.30.01.00.00	[ 25154 / 60.60 ]					Published 1997-12
Information technology - Open-Edi Reference Model						
SC 32/WG 01	Knoppers, Jake					
1.32.20.01.00.00	[ 30823 / 20.20 ]					CD expected 2001-10
Information technology - Identification and Mapping of Various Categories of Jurisdictional Domains			2001-10	2002-07	2002-12	2003-06
<b>SC 32/WG 02 Metadata</b>						
SC 32/WG 02	*to be defined*	NP	CD	FCD	FDIS	IS
1.32.02.02.00.00	[ 16549 / 60.60 ]					Published 1987-07
Information processing systems - Concepts and Terminology for the Conceptual Schema and the Information Base						
SC 32/WG 02	Gradwell, David					
1.32.40.01.00.00	[ 17985 / 90.93 ]					Published 1990-06
Information technology - Information Resource Dictionary System (IRDS) Framework						
SC 32/WG 02	Bourne, Tim					
1.32.41.01.00.00	[ 18821 / 90.93 ]					Published 1993-04
Information technology - Information Resource Dictionary Systems (IRDS) Services Interface						

SC 32/WG 02 1.32.41.01.00.01 [ 24341 / 60.60 ] Information technology - Information Resource Dictionary System (IRDS) Service Interface - Amendment 1: C Language Binding	Gradwell, David	ISO/IEC 10728 :1993/Amd 1:1995	Published 1995-12
SC 32/WG 02 1.32.41.01.00.02 [ 24342 / 60.60 ] Information technology - Information Resource Dictionary System (IRDS) Service Interface - Amendment 2: Ada language binding	Colket, William	ISO/IEC 10728 :1993/Amd 2:1996	Published 1996-11
SC 32/WG 02 1.32.41.01.00.03 [ 27123 / 60.60 ] Information technology - Information Resource Dictionary System (IRDS) Service Interface - Amendment 3: CORBA IDL Binding	Gradwell, David	ISO/IEC 10728 :1993/Amd 3:1998	Published 1996-12
SC 32/WG 02 1.32.41.01.00.04 [ 28052 / 60.60 ] Information technology - Information Resource Dictionary System (IRDS) Service Interface - Amendment 4: Remote Procedure Call IDL Binding	Horiuchi, Hajini	ISO/IEC 10728 :1993/Amd 4:1998	Published 1998-05
SC 32/WG 02 1.32.14.02.01.00 [ 25773 / 60.60 ] Information technology - Structure for the identification of organizations and organization parts - Part 1: Identification of organization schemes	*to be defined*	ISO/IEC 6523-1:1998	Published 1998-12
SC 32/WG 02 1.32.14.02.02.00 [ 25774 / 60.60 ] Information technology - Structure for the identification of organizations and organization parts - Part 2: Registration of organization identification schemes	*to be defined*	ISO/IEC 6523-2:1998	Published 1998-12
SC 32/WG 02 1.32.21.01.00.00 [ 27695 / 90.92 ] Information technology - Specification of Data Value Domain	Newton, Judith	ISO/IEC TR 15452:2000	32N0228 Published 2000-02-15
SC 32/WG 02 1.32.10.01.00.00 [ 11219 / 90.92 ] Information interchange - Representation of human sexes	Knoppers, Jake	ISO 5218:1977	Published 1977-09
SC 32/WG 02 1.32.10.02.00.00 [ 31365 / 20.00 ] Information technology - Representation of human sexes (Revision of ISO 5218:1977)	Knoppers, Jake	ISO/IEC AWI 5218 1998-07	CD expected 2001-04 2002-02 2001-04 2002-07
SC 32/WG 02 1.32.11.01.00.00 [ 17651 / 60.60 ] Information technology - Guidelines for the organization and representation of data elements for data interchange - Coding methods and principles	*to be defined*	ISO/IEC TR 9789:1994 type 3	Published 1994
SC 32/WG 02 1.32.19.01.00.00 [ 2365 / 90.20 ] Information technology - Representation of data elements values: Notation of the format		ISO/IEC 14957:1996	Published 1996-12
SC 32/WG 02 1.32.15.01.01.00 [ 2349 / 90.92 ] Information technology - Specification and standardization of data elements - Part 1: Framework for the specification and standardization of data elements	Gillman, Dan	ISO/IEC 11179-1:1999	32N0243 Published 1999-12-01

SC 32/WG 02 1.32.15.01.02.00 [ 2317 / 90.92 ] Information technology - Specification and standardization of data elements - Part 2: Classification for data elements	Bargmeyer, Bruce	ISO/IEC 11179-2:2000				32N0245 Published 2000-03
SC 32/WG 02 1.32.15.01.03.00 [ 19184 / 90.92 ] Information technology - Specification and standardization of data elements - Part 3: Basic attributes of data elements	Christensen, Joe	ISO/IEC 11179-3:1994				Published 1994-12
SC 32/WG 02 1.32.15.02.03.00 [ 31367 / 30.60 ] Information technology -- Data Management and Interchange -- Metadata Registries (MDR) - Part 3, Registry Metamodel (MDR3) (Revision of ISO/IEC 11179-3:1994)	Christensen, Joe	ISO/IEC FCD 11179-3	1998-07	2001-05 2000-06	2001-11 2001-05	32N0643 FCD closes 2001-10-05 2002-03 2002-06
SC 32/WG 02 1.32.15.01.04.00 [ 23788 / 90.92 ] Information technology - Specification and standardization of data elements - Part 4: Rules and guidelines for the formulation of data definitions	Bargmeyer, Bruce	ISO/IEC 11179-4:1995				Published 1995-07
SC 32/WG 02 1.32.15.01.05.00 [ 1758 / 90.92 ] Information technology - Specification and standardization of data elements - Part 5: Naming and identification principles for data elements	Newton, Judith	ISO/IEC 11179-5:1995				Published 1995-12
SC 32/WG 02 1.32.15.01.06.00 [ 1677 / 90.92 ] Information technology - Specification and standardization of data elements - Part 6: Registration of data elements	Ngo, Phong	ISO/IEC 11179-6:1997				Published 1997-04
SC 32/WG 02 1.32.16.01.00.00 [ 34343 / 30.60 ] Information technology - Achieving Metadata Registry Content Consistency - Part 1: Data elements	Newton, Judith	ISO/IEC FPDTR 20943-1		2001-05 2000-06	2001-11 2001-05	FCD closes 2001-10-05 2002-03 2002-06
SC 32/WG 02 1.32.16.01.03.00 [ 35339 / 20.00 ] Information technology - Achieving Metadata Registry Content Consistency - Part 3: Value Domains	Gillman, Dan	ISO/IEC WD 20943-3		2001-10		N0668 WD 2001- 08
SC 32/WG 02 1.32.17.01.00.00 [ 34344 / 20.00 ] Information technology - Metadata Access Service	Farance, Frank	ISO/IEC AWI 20944	2000-10	2001-10		CD expected 2001-10
SC 32/WG 02 1.32.15.02.01.00 [ 35343 / 20.20 ] Information Technology -- Data Management and Interchange -- Metadata Registries (MDR) - Part 1: Framework for the specification and standardization of administered items (Revision of ISO/IEC 11179-1:1999)	Gillman, Dan	ISO/IEC AWI 11179-1		2001-10		CD expected 2001-10-30
SC 32/WG 02 1.32.15.02.02.00 [ 35345 / 20.00 ] Information technology -- Data Management and Interchange -- Metadata Registries (MDR) - Part 2: Classification for administered items (Revision of ISO/IEC 11179-2:2000)	Bargmeyer, Bruce	ISO/IEC AWI 11179-2		2002-05		CD expected 2002-05-30

SC 32/WG 02 1.32.15.02.04.00 [ 35346 / 20.00 ] Information Technology -- Data Management and Interchange -- Metadata Registries (MDR) - Part 4: Rules and guidelines for the formulation of data definitions (Revision of ISO/IEC 11179-4:1995)	Bargmeyer, Bruce	ISO/IEC AWI 11179-4 2001-10			CD expected 2001-10-30
SC 32/WG 02 1.32.15.02.05.00 [ 35347 / 20.00 ] Information Technology -- Data Management and Interchange -- Metadata Registries (MDR) - Part 5: Naming and identification principles for administered items (Revision of ISO/IEC 11179-5:1995)	Newton, Judith	ISO/IEC WD 11179-5 2001-04			32N0657 CD expected 2001-10
SC 32/WG 02 1.32.15.02.06.00 [ 35348 / 20.00 ] Information Technology -- Data Management and Interchange -- Metadata Registries (MDR) - Part 6: Registration of administered items (Revision of ISO/IEC 11179-6:1997)	Ngo, Phong	ISO/IEC AWI 11179-6 2001-04			CD expected 2001-04
SC 32/WG 02 1.32.16.01.02.00 [ 35338 / 20.00 ] Information technology - Achieving Metadata Registry Content Consistency - Part 2: XML Structured Data	Bargmeyer, Bruce	ISO/IEC AWI 20943-2 2002-05			CD expected 2002-05
SC 32/WG 02 1.32.18.01.00.00 [ 33055 / 20.20 ] Information technology - IT enablement of coded domains	Knoppers, Jake	ISO/IEC WD 18022 2001-06	2001-10		CD expected 2001-06 2002-07 2002-10
SC 32/WG 02 1.32.21.02.00.00 [ 35349 / 20.00 ] Information technology - Specification of Data Value Domain (revision of TR 15452:2000)	Gates, Ray	ISO/IEC AWI 15452 2001-10			32N0228 CD expected 2001-10
SC 32/WG 02 1.32.58.01.03.00 [ 21473 / 60.60 ] Information technology - Data Management Export/Import Facilities - Part 3: Export/Import Facilities for IRDS	Wilcox, Terry	ISO/IEC 13238-3:1998			21N10899 Published 1998-12

## SC 32/WG 03 Database Languages

		NP	CD	FCD	FDIS	IS
SC 32/WG 03 1.32.03.04.99.00 [ 34894 / 60.60 ] Information technology- Database languages - SQL - Technical Corrigendum 1 for SQL:1999/Cor 1:2000	Cannan, Stephen	ISO/IEC 9075:1999/Cor 1				32N0531 Published 2000-12-21
SC 32/WG 03 1.32.03.04.01.00 [ 26196 / 90.92 ] Information technology - Database Language SQL - Part 1: Framework	Cannan, Stephen	ISO/IEC 9075-1:1999				32N0222 Published 1999-11-15
SC 32/WG 03 1.32.03.04.01.01 [ 34738 / 60.00 ] Information technology- Database languages SQL - Amendment 1: SQL/OLAP (for SQL:1999)	Melton, Jim	ISO/IEC FDAM 9075 : Amd 1		1999-11 1999-11	FDAM snt to ITTF 2000-08-30 2000-08 2000-08	32N0379 2000-12
SC 32/WG 03 1.32.03.04.02.00 [ 26197 / 90.92 ] Information technology - Database Language SQL - Part 2: Foundation (SQL:1999)	Cannan, Stephen	ISO/IEC 9075-2:1999				32N0223 Published 1999-11-15
SC 32/WG 03 1.32.03.04.03.00 [ 30609 / 90.92 ] Information technology - Database Language SQL - Part 3: Call-Level Interface	Cannan, Stephen	ISO/IEC 9075-3:1999				32N0261 Published 1999-11-15

SC 32/WG 03 1.32.03.04.04.00 Information technology - Database Language SQL - Part 4: Persistent Stored Modules	Cannan, Stephen [ 29864 / 90.92 ]	ISO/IEC 9075-4:1999				32N0224 Published 1999-11-15
SC 32/WG 03 1.32.03.04.05.00 Information technology - Database Language SQL - Part 5: Language Bindings	Cannan, Stephen [ 26198 / 60.60 ]	ISO/IEC 9075-5:1999		7		32N0225 Published 1999-11-15
SC 32/WG 03 1.32.03.04.09.00 Information technology - Database Language SQL - Part 9: Management of External Data	Melton, Jim [ 31370 / 60.00 ]	ISO/IEC 9075-9:2001				32N0368 Published 2001-05-15
SC 32/WG 03 1.32.03.04.10.00 Information technology --Database Language SQL - Part 10: Object language bindings (for SQL:1999)	Melton, Jim [ 30613 / 60.60 ]	ISO/IEC 9075-10:2000				32N0475 Published 2000-11-01
SC 32/WG 03 1.32.03.05.01.00 Information technology - Database Languages - SQL - Part 1: Framework (SQL/Framework)	Melton, Jim [ 34132 / 30.20 ]	ISO/IEC CD 9075-1	2001-01 2000-11	2001-08	2002-06	32N0593 CD ballot closed 2001-03-02 2002-10
SC 32/WG 03 1.32.03.05.02.00 Information technology - Database Languages - SQL - Part 2: Foundation (SQL/Foundation)	Melton, Jim [ 34133 / 30.20 ]	ISO/IEC CD 9075-2	2001-01 2000-11	2001-08	2002-06	32N0594 CD ballot closed 2001-03-02 2002-10
SC 32/WG 03 1.32.03.05.03.00 Information technology - Database Languages - SQL - Part 3: Call-Level Interface (SQL/CLI)	Melton, Jim [ 34134 / 30.20 ]	ISO/IEC CD 9075-3	2001-01 2000-11	2001-08	2002-06	32N0595 CD ballot closed 2001-03-02 2002-10
SC 32/WG 03 1.32.03.05.04.00 Information technology - Database Languages - SQL - Part 4: Persistent Stored Modules (SQL/PSM)	Melton, Jim [ 34135 / 30.20 ]	ISO/IEC CD 9075-4	2001-01 2000-11	2001-08	2002-06	32N0596 CD ballot closed 2001-03-02 2002-10
SC 32/WG 03 1.32.03.05.07.00 Information technology - Database Language SQL - Part 7: Temporal (for SQL:200n)	Melton, Jim [ 30611 / 20.00 ]	ISO/IEC WD 9075-7	2001-11	2001-11		CD expected 2001-11 2002-08 2002-12
SC 32/WG 03 1.32.03.05.09.00 Information technology - Database Languages - SQL - Part 9: Management of External Data (SQL/MED)	Melton, Jim [ 34136 / 30.20 ]	ISO/IEC CD 9075-9	2001-02 2000-11	2001-08	2002-06	32N0597 CD ballot closed 2001-03-02 2002-10
SC 32/WG 03 1.32.03.05.10.00 Information technology --Database Languages - SQL - Part 10: Object language bindings (SQL/OLB)	Melton, Jim [ 34137 / 30.20 ]	ISO/IEC CD 9075-10	2001-01	2001-08	2002-06	32N0598 CD ballot closed 2001-03-02 2002-10
SC 32/WG 03 1.32.03.05.11.00 Information technology --Database Languages - SQL - Part 11: Information and Definition Schemas (SQL/Schemata)	Melton, Jim [ 34917 / 30.20 ]	ISO/IEC CD 9075-11	2001-01 2000-11	2001-08	2002-06	32N0599 CD ballot closed 2001-03-02 2002-10
SC 32/WG 03 1.32.03.05.12.00 Information technology --Database Language SQL - Part 12: Replication (for SQL:200n)	Melton, Jim [ 34127 / 20.00 ]	ISO/IEC AWI 9075-12	2000-05	2001-05	2001-11	CD expected 2001-05 2002-08 2002-12
SC 32/WG 03 1.32.03.05.13.00 Information technology --Database Language SQL - Part 13: SQL/JRT (for SQL:200n)	Melton, Jim [ 35340 / 20.00 ]	ISO/IEC FCD 9075-13	2000-10	2001-04 2001-04	2002-06	32N0633 FCD ballot closes 2001-08-30 2002-10

SC 32/WG 03	Melton, Jim	ISO/IEC WD 9075-14				32N0634
1.32.03.05.14.00	[ 35341 / ]					FCD expected 2001-07
Information technology --Database Language SQL -		2000-10	2001-07		2002-06	2002-10
Part 14: SQL/XML (for SQL:200n)						

## SC 32/WG 04 SQL Multimedia & Application Packages

		NP	CD	FCD	FDIS	IS
SC 32/WG 04	Ashworth, Mark	ISO/IEC CD 13249-5				32N0642
1.32.04.02.05.00	[ 35044 / 20.20 ]					CD ballot closes 2001-08-17
Information technology - SQL Multimedia and			2001-06	2001-12	2002-09	2002-12
Application Packages - Part 5: Still Image 2nd			2001-05			

SC 32/WG 04	Newton, Mike	ISO/IEC13249-1:2000				32N0469
1.32.04.01.01.00	[ 21484 / 60.60 ]					Published 2000-09-01
Information technology - SQL Multimedia and						
Application Packages - Part 1: Framework						

SC 32/WG 04	Newton, Mike	ISO/IEC AWI 13249-1				
1.32.04.02.01.00	[ 34128 / 20.00 ]					FCD expected 2001-07
Information technology - SQL Multimedia and			2001-05	2001-07	2002-04	2002-08
Application Packages - Part 1: Framework 2nd ed.						

SC 32/WG 04	Ashworth, Mark	ISO/IEC13249-2:2000				32N0467
1.32.04.01.02.00	[ 28053 / 60.60 ]					Published 2000-09-01
Information technology - SQL Multimedia and						
Application Packages - Part 2: Full -Text						

SC 32/WG 04	Ashworth, Mark	ISO/IEC CD 13249-2				32N0640
1.32.04.02.02.00	[ 31368 / 20.20 ]					CD ballot closed 2001-08-17
Information technology - SQL Multimedia and			2001-06	2001-12	2002-09	2002-12
Application Packages - Part 2: Full-Text (Revision of			2001-05			
ISO/IEC DIS 13249-2)						

SC 32/WG 04	Ashworth, Mark	ISO/IEC 13249-3:1999				32N0229
1.32.04.01.03.00	[ 28054 / 60.60 ]					Published 1999-12-01
Information technology - SQL Multimedia and						
Application Packages - Part 3: Spatial						

SC 32/WG 04	Ashworth, Mark	ISO/IEC CD 13249-3				
1.32.04.02.03.00	[ 31369 / 20.20 ]					CD ballot closed 2001-08-17
Information technology - SQL Multimedia and			2001-06	2001-12	2002-09	2002-12
Application Packages - Part 3: Spatial 2nd Edition			2001-05			

SC 32/WG 04	Ashworth, Mark	ISO/IEC 13249-5:2001				32N0605
1.32.04.01.05.00	[ 30617 / 50.20 ]					Published 2001-05-01
Information technology - SQL Multimedia and						
Application Packages - Part 5: Still Image						

SC 32/WG 04	Schwenkreis, Friedemann	ISO/IEC FCD 13249-6				32N0647
1.32.04.01.06.00	[ 34129 / 30.60 ]					FCD ballot closes 2001-10-05
Information technology - Database languages - SQL			2000-12	2001-07	2002-04	2002-08
Multimedia and Application Packages - Part 6: Data			2000-11	2001-05		
Mining						

## SC 32/WG 05 Database Access and Interchange

		NP	CD	FCD	FDIS	IS
SC 32/WG 05	Hadjioannou, John	ISO/IEC9579:2000 ed 2				32N0339
1.32.05.02.00.00	[ 30615 / 60.60 ]					Published 2000-02-15
Information technology - Remote database access for						
SQL (RDA/SQL). Edition 2.						

SC 32/WG 05	Hadjioannou, John	ISO/IEC CD 20606-2				32N0369
1.32.53.01.03.00	[ 31373 / 30.60 ]					On Hold pending rqmt's placed by WG5 on WG3
Information technology - Data Management and			2000-05			
Interchange - Distribution Schema		1998-08	1999-08			

SC 32/WG 05	Hadjioannou, John	ISO/IEC AWI 20606-3				
1.32.53.01.04.00	[ 34918 / 20.00 ]					FCD expected 2001-04
Information technology - Data Management and Interchange - Encompassing Transaction		1998-08	2000-10	2001-04	2001-10	2002-02
SC 32/WG 05	Hadjioannou, John	ISO/IEC FCD 9579 edition 3				32N0349
1.32.05.03.00.00	[ 33157 / 60.60 ]					FDIS expected 2000-12
Information technology - Remote database access for SQL (RDA/SQL) - Edition 3 (for SQL 1999)				1998-09	2000-12	2001-06
				1999-08		
SC 32/WG 05	Hadjioannou, John	ISO/IEC CD 9579 ed 3 amd 1				CD expected 2001-12
1.32.05.03.00.01	[ 34130 / 20.00 ]					2002-10
Information technology - Remote Database Access for SQL: XML Encoding Amendment to Edition 3			2001-06	2001-12		2003-02
SC 32/WG 05	Hadjioannou, John	ISO/IEC CD 9579 ed 4				FCD expected 2001-04
1.32.05.04.00.00	[ 34044 / 20.00 ]					2001-10
Information technology - Remote Database Access for SQL: (RDA/SQL). Edition 4			2000-10	2001-04		2002-02
SC 32/WG 05	Hadjioannou, John	ISO/IEC CD 9579 ed 3 amd 2				CD expected 2001-12
1.32.05.03.00.02	[ 34131 / 20.00 ]					2002-12
Information technology - Remote Database Access for SQL: Support for SQL/MED Amendment 2 to Edition 3			2001-12	2002-07		2003-02
SC 32/WG 05	Hadjioannou, John	ISO/IEC CD 20606-1				FCD Expected 2001-04
1.32.53.01.02.00	[ 35486 / 20.20 ]					2001-10
Information technology - Data Management and Interchange – Authorization and Audit				2001-04		2002-02
SC 32/WG 05	Berube, Jean	ISO/IEC FCD 13238-1				32N0583
1.32.58.01.01.00	[ 29940 / 40.20 ]					FCD closed 2001-03-05
Information technology - Data Management Export/Import Facilities - Part 1: Standardization Framework			1997-09	1997-11	2000-10	2000-11
				2000-10		2001-09

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